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Conference Abstract

FAIR Digital Objects and Natural Science Collection Data

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Abstract

The Distributed System of Scientific Collections (DiSSCo) is a new Research Infrastructure that is working towards the unification of all European natural science collections under common curation, access policies, and practices (Addink et al. 2019). The physical specimens in the collections and the vast amount of data derived from and linked to these specimens are important building blocks for this unification process. Primarily coming from large scale digitization projects (Blagoderov et al. 2012) along with new types of data collection, curation, and sharing methods (e.g. Kays et al. 2020), these specimens hold data that are critical for different scientific endeavours (Cook et al. 2020, Hedrick et al. 2020). Therefore it is important that the data infrastructure and the relevant services can provide a long-term sustainable and reliable access to these data. To that end, DiSSCo is working towards transforming a fragmented landscape of the natural science collections into an integrated data infrastructure that can ensure that these data can be easily Findable, more Accessible, Interoperable and Reusable – in other words, comply with the FAIR Guiding Principles (Wilkinson et al. 2016).

A key decision for the design of this FAIR data infrastructure was to adopt FAIR Digital Objects (Wittenburg and Strawn 2019) that will enable the creation of Digital Specimen—a machine-actionable digital twin of the physical specimen (Lannom et al. 2020). This FAIR Digital Object by design, ensures FAIRness of the data (De Smedt et al. 2020) and thus will allow DiSSCo to provide services that are essential for natural science collection-based research. This talk summarises the motivation behind this adoption by showing how design

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decisions and best practices were influenced by the FAIR data principles, global discussions around FAIR Digital Objects and outputs from the Research Data Alliance (RDA) interest and working groups.

Keywords

FAIR Digitial Object, FAIR, natural science collections, RDA, Digital Specimens.

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